

### **REMARKS**

The present Amendment is in response to the Office Action mailed August 28, 2006. Claims 1-3, 5m 7, 15, 26-28, 32-24, and 43 are amended, and claims 1-48 remain pending in view of the above amendments.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. The remarks or lack of remarks herein in not to be construed as an admission on part of the Applicant with respect to the Examiner's interpretation of the teachings of the cited art and Applicant reserves the right to contest the Examiner's conclusions at any future time as necessary. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

### **Interview**

Applicant's express their appreciation to the Examiner for conducting an interview with Applicant's representative on November 7, 2006. This response includes the substance of the interview.

### **Rejection Under 35 U.S.C. § 102**

The Office Action rejected claims 1-48 as being anticipated by U.S. Patent No. 6,522,494 (*Magee*). The following discussion illustrates that claims 1-48 are not anticipated by *Magee*. In particular, *Magee* fails to teach each and every limitation of the pending claims as arranged in the claims.

In disk drives, the segments between servo fields are used to store recorded data. See specification ¶[0044]. This is echoed by *Magee*, which teaches that "an arrangement of so-called servo patterns is magnetized into the disk prior to the time a

user is to use the drive to store data. These servo patterns are arrayed as fields throughout the disk, typically one servo field in each sector of each track. Data are recorded on the tracks in the segments between the servo fields." See col. 1, lls. 13-18. In fact, the use of the segments to store recorded data is a primary purpose of a disk drive.

Before disk drives can be used to store recorded data, it is necessary to write servo data on a disk. Servo data enables accurate locating and following of the tracks that hold recorded data when the disk is In use.

*Magee's* approach to servoing a disk drive includes the use of servo patterns. As discussed at the interview, however, *Magee* teaches writing servo patterns on a disk in a hard disk drive assembly but fails to teach or suggest the use of a data set pattern as required by claim 1. For example, *Magee* states in several instances that the read/write heads are used to write servo patterns. See *e.g.*, col. 2, lls. 62-65; col. 7, lls. 1-8. According to *Magee*, a servo pattern is arrayed as fields throughout the disk, typically one servo field in each sector of each track. See col. 1, lls. 15-17. *Magee* teaches writing servo patterns (see *e.g.*, col. 7, lls. 25-30) or writing servo fields in each sector, but fails to teach or suggest a data set pattern in the segments between servo fields. *Magee* further fails to teach or suggest using the data set pattern in writing subsequent servo data or in generating feedback used in writing subsequent servo data.

For example, claim 1 has been amended to require that the reference track include both servo data and a data set pattern<sup>1</sup>. Claim 1 further recites that the first data set pattern is used in writing subsequent servo data in the disk drive. By way of example only, the data set pattern can be used to generate a position error signal (PES) that can compensate for disk drive motions such as thermal motion, etc, while writing subsequent servo data in the disk drive. See ¶[0046].

There is no teaching or suggestion in *Magee* of a data set pattern that is used in writing subsequent servo data. In fact, *Magee* does not appear to discuss data set patterns as required in claim 1. Further, *Magee* does not discuss the use of data set patterns that are used in writing subsequent servo data.

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<sup>1</sup> Example data set patterns can be found at least in Figure 8 and accompanying text of the specification.

For example, the PES taught by *Magee* is "measured relative to servo patterns already written on the disk". See col. 12, lls. 8-9. The PES taught by *Magee* contains position errors resulting from the incorrect location of the servo patterns in inertial space and are not, as required by claim 1 related to the data set pattern. See col. 12, lls. 9-11. As a result, *Magee* fails to use a data set pattern in writing subsequent servo data as required by claim 1.

For at least these reasons, Applicant respectfully submits that claim 1 is not anticipated by the cited art as discussed at the interview and claims 1-14 are therefore in condition for allowance. For at least the same reasons, Applicant respectfully submits that independent claims 26 and 32 are not anticipated by the cited art.

More particularly, claim 26 has been amended to require that the feedback include a position error signal generated at least from the first data set pattern. As discussed above, *Magee* teaches that the PES is measured relative to servo patterns already written on the disk. See col. 12, lls. 8-9. More particularly, *Magee* teaches that the PES is associated with the desired track location of the read head, the position of the micro-actuator with respect to the centerline of the E-Block and a track number, which denotes the closest track to the read head. See col. 11, lls. 28-33. Thus, *Magee* fails to teach or suggest that a position error signal that is generated from the first data set pattern included in the first reference track as required by claim 26.

Claim 32, in addition to required a first data set pattern, also requires a second data set pattern that is on a second side of a disk and that is substantially similar to the first data set pattern. Further, claim 32 requires using at least a part of the servo data and the first data set pattern as feedback to generate a position error signal. As discussed above, *Magee* fails to teach or suggest a position error signal that is generated from at least a part of the servo data and the first data set pattern. Further, *Magee* fails to teach or suggest that first and second sides of a disk have substantially similar data set patterns.

For at least these reasons, the independent claims 26 and 32 and corresponding dependent claims 27-31 and 33-42, respectively, are not anticipated by *Magee*.

Claim 15 has been amended to require performing a consistency check by positioning at least one of the recording heads intermittently over two tracks to identify track encroachment or track separation. A consistency check can help determine whether a rewrite is determined. In contrast, *Magee* suggest that "the position error for the servo patterns for a given disk drive unit is accumulative." See col. 9, lls. 9-10. *Magee* then suggests that this may place a limit on the track density on the various disk surfaces, but does not suggest performing a consistency check as required by claim 15. For at least these reasons, claim 15 along with dependent claims 16-25 are not anticipated by the cited art.

Claim 43 requires measuring actual track widths generated by different recording heads in a disk drive. Based on the measured track widths, the track pitches for each surface of the drive can be selected. As a result, the track pitches of a first surface are different from track pitches on a second surface of the disk drive.

In contrast, *Magee* only teaches that "the effective track density of the drive is controlled by how well the micro-actuator can be positioned." See col. 12, lls. 58-59. However, *Magee* does not teach or suggest that different surfaces of a disk drive can have different track pitches based on the measured track widths. In other words, the ability to control how well the micro-actuator can be positioned does not account for the actual track width and does not teach or suggest that different surfaces can have different track widths and different track pitches as recited in claim 43.

For at least these reasons, claims 43-48 are not taught or suggested by the cited art.

### **Conclusion**

In view of the foregoing, and consistent with the discussions conducted in the Examiner Interview, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 28<sup>th</sup> day of December, 2006.

Respectfully submitted,

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